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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/622,701

07/21/2003

Heinz-Georg Krimmel

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08/24/2006

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EXAMINER

LIU, LI

ART UNIT

PAPER NUMBER

2631

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/622,701	KRIMMEL ET AL.	
	Examiner	Art Unit	
	Li Liu	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>07/21/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Regarding claim 6, the phrase "e.g." renders the claim indefinite because it is unclear whether the limitation(s) following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, 6-9, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Persson (EP 1 143 646).

1) With regard to claim 1, Persson discloses a network component (Figure 2) for an optical network, comprising

an optical transmitter or receiver (40 and 50 in Figure 2), in particular an optical transceiver (the combination of 40 and 50 can be interpreted as the transceiver),

an optical splitting device (60 in Figure 2), which is connected directly or indirectly to the optical transmitter or receiver (50 in Figure 2), wherein the optical splitting device has an asymmetrical splitting ratio (column 4 line 52 to column 5 line

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15), transferring light into different fibers or accepting light from different fibers (coupler 60 transfers light to path 10 and path 20).

2) With regard to claim 3, Persson discloses wherein said optical transceiver comprises an optical splitting device (60 in Figure 2) with an asymmetrical splitting ratio, corresponding to the path attenuation of the ring segments it is connected to (ABSTRACT, [0021] and [0024]).

3) With regard to claim 4, Persson discloses wherein the splitting ratio of said optical splitting device is adjustable ([0026]), in particular by mechanic or electronic means ([0026]).

4) With regard to claim 6, Persson discloses wherein the optical splitting device is an all-fiber device (fused coupler, [0022]).

5) With regard to claim 7, Persson discloses a passive optical ring network (Figure 1, the network is a passive optical ring since no regenerators and active equipment are used between the nodes A and B etc, and the splitters are unpowered), wherein the network comprises a network node comprising a component according to claim 1 (30 in Figure 2).

6) With regard to claim 8, Persson discloses wherein the network comprises at least one optical transceiver (the combination of 40 and 50 can be interpreted as the transceiver) having an asymmetrical optical splitting device (60 in Figure 2) being connected to asymmetrical ring segments (e.g. node E, the segment directly from E to A is different the segment from E->D->C->B->A, [0019]), wherein the optical asymmetrical

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splitting ratio corresponds to the attenuation ratio of the ring segments ([0021] and [0024]).

7) With regard to claim 9, Persson discloses wherein the network comprises optical transceiver (the combination of 40 and 50 can be interpreted as the transceiver) with an optical splitting device (60 in Figure 2) having an asymmetrical splitting ratio, which is adapted to path attenuation of the optical transceiver in the access ring ([0021] and [0024]).

8) With regard to claim 11, Persson discloses a method of driving a passive optical ring network (Figure 1), wherein a node comprising an optical transmitter or receiver (40 and 50 in Figure 2), in particular a transceiver (the combination of 40 and 50 can be interpreted as the transceiver), being connected to asymmetrical ring segments (e.g. node E, the segment directly from E to A is different the segment from E->D->C->B->A, [0019]), splits the light corresponding to the attenuation ratio of the ring segments ([0021] and [0024]).

9) With regard to claim 12, Persson discloses wherein the splitting ratio is self-adjusting ([0026], Persson teaches that the powers of paths are monitored and the information is feedback to management system and then the splitting ratio is adjusted. The applicant states that the "self-adjusting" is based on the intensity of both segments. Therefore, the splitting ratio in Persson's device is self-adjusting).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Persson (EP 1 143 646) in view of Chiaroni et al (7,031,608).

1) With regard to claim 2, Persson discloses all of the subject matter as applied in claim 1 above, and Persson further disclose that the optical transceiver is connected to a path-protected passive-optical ring (Figure 1, 20 in Figure 2 is the protection path, however, either 10 or 20 may serve as the working or protection path [0019]; the network is a passive optical ring since no regenerators and active equipment are used between the nodes A and B etc, and the splitters are unpowered). But Persson does not disclose that the optical transceiver is connected to a path-protected passive-optical **metro access ring**.

However, Chiaroni et al, in the same field of endeavor, teaches that the optical transceiver is connected to a path-protected passive-optical metro access ring (column 2 line 16-17, and Figure 2, 3 and 8, and column 6 line 65 and column 7 lines 23-24 and 38-54). Chiaroni et al uses asymmetrical splitter in their device (column 7 line 60 to column 8 line 2). Chiaroni et al provides a network solution to transport efficiently voice and/or data traffic in the metro access area, with limited opto-electronic conversion to support high bit rates at low cost.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the path-protected PON taught by Chiaroni et al with the device of Persson so that a high bit rate, low cost and protected metro ring can be obtained.

2) With regard to claim 5, Persson discloses all of the subject matter as applied in claim 1 above, but Persson does not explicitly disclose wherein a multiplexer is connected between the optical splitting device and said optical transceiver or wherein a multiplexer is connected behind the optical splitting device and said optical transceiver.

However, Chiaroni et al discloses a multiplexer (25 in Figure 5, column 8 line 50-51) which is connected between the optical splitting device (16 in Figure 5) and said optical transmitter (27 in Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the multiplexer taught by Chiaroni et al in the device of Persson so that more customers can be added to the system and cost can be reduced.

3) With regard to claim 10, Persson discloses all of the subject matter as applied in claim 7 above, but Persson does not explicitly disclose wherein a multiplexer connects a plurality of customer stations to the network.

However, Chiaroni et al discloses a multiplexer (25 in Figure 5, column 8 line 50-51) which is connected between the optical splitting device (16 in Figure 5) and optical transmitters (27 in Figure 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the multiplexer taught by Chiaroni et al in the device of Persson so that more customers can be added to the system and cost can be reduced.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Onoda et al (US 5,875,054) disclose a variable optical splitter.

Sucharczuk et al (US 6,618,522) discloses a active equipment protection methods and apparatus and a asymmetrical splitter is used.


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Liu whose telephone number is (571)270-1084. The examiner can normally be reached on Mon-Fri, 7:30 am - 5:00 pm, alternating Fri off..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shuwang Liu can be reached on (571)272-3036. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Li Liu
August 17, 2006

A handwritten signature in black ink, appearing to read 'Shuwang Liu', with a stylized flourish at the end.

SHUWANG LIU
SUPERVISORY PATENT EXAMINER